Chapter 13
Research-Led Curriculum Redesign for Personalised Learning Environments: A Case Study in the Faculty of Information Technology

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ABSTRACT
This chapter provides a case study outlining strategies which represent a starting point in the development of a personalised learning environment (PLE). The initial strategies focus on student engagement in two units run by the Faculty of Information Technology at Monash University, Australia. The case study looks at changing the approach to a more personalised learning environment in the respective IT units, and it also outlines how the changes were made based on a meta-analysis research of the Australian Course Experience Questionnaire (CEQ).

INTRODUCTION
Personalised Learning Environments (PLEs) offer many advantages to learning and teaching in higher education. To become implemented broadly, they will need to be able to address challenges within the higher education sector including large class sizes, multiple national and international campuses, diverse student cohorts and collaboration within
diverse and isolated teaching teams. This chapter explores commencement of implementation strategies adopted for a PLE-based approach within one such landscape of challenges in a large Australian university with multiple campuses (including overseas). The PLE approach was implemented in a Faculty of Information Technology, and was a response to a number of problems identified by the Faculty over recent years with its core undergraduate subjects. Overall, the chapter argues that PLEs may become a potentially powerful strategy to improve the student experience and engagement.

BACKGROUND

In the last decade or more, with significant changes in the student population (more diverse student cohorts, including mature-age students), a large intake of international students and also a general massification of Australian higher education, students have become one of the most important stakeholders in higher education. The student cohorts are more diversified than was the case in the past. They now display more varied levels of academic, cultural and linguistic preparation for tertiary study. As a consequence, they also exhibit a more diverse range of expectations and needs. Despite this realisation, universities in general have been slow to recognize the role of student views in monitoring and changing the learning and teaching environments (OECD, 1998; Meek, 2000; Fiocco, 2005).

Research over the past decade has recognised that student perceptions are important parameters of the social and psychological aspects of the learning environments (Fraser, 1998; Ramsden, 2005). Research studies have consistently confirmed a strong correlation between learning and teaching environments and levels of satisfaction (Fraser, 1998; Nair and Fisher, 2001). Recently, many providers in the higher education sector have realised the need to re-evaluate their approaches to provision by placing a greater emphasis on meeting the expectations and requirements of their stakeholders, and particularly their students (Cheng and Tam, 1997; Lee et al, 2000; Wright and O’Neil, 2002; Griffin et al, 2003; McInnis, 2003).

As the student body has become increasingly more diversified in recent years, one way in which universities have approached the process of determining the needs of their diversifying body of students was through the collection of student perceptions via surveys. The significance of student surveys in determining student needs and the value of the student voice in curriculum restructure was highlighted, for instance, in the recent extensive study (undertaken by Scott between 2001 – 2004) involving approximately 95,000 graduates from 14 Australian universities (Scott, 2006).

The aspect of taking account of the changing student body, their needs and also the range of factors which need to be considered as part of student experience (including a regular review of the relevance of particular surveys) was emphasised in a study by Griffin et al (2003). The study involved nearly 4000 students from 15 Australian universities and focused on the extent to which the current Australian Course Experience Questionnaire (which is posted to all recently graduated students across Australian universities) covered different aspects of student experience.

Implicit in the gradual diversification of student cohorts and also in the realisation of the necessity to cater for student needs is the focus on developing personalised learning environments. In order to manage the changing student demographics and contemporary views on educational approaches, and thus in search of more personalised learning approaches, many universities turned to web-based and technology-enhanced approaches to course delivery to improve student learning (Becker et al, 2007).

The idea of personalised learning environments (PLEs) has become topical in the last